

Publications

List of Journal Publication (SCI/SCIE)

- [1]. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Low Cost Localization using Nyström Extended Locally Linear Embedding." *Pattern Recognition Letters* (2018).
- [2]. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Patch based LLE with Selective Neighborhood for Node Localization." *IEEE Sensors Journal* (2018).
- [3]. Vishal Krishna Singh, Manish Kumar, and Shekhar Verma. "Node Scheduling and Compressed Sampling for Event Reporting in WSNs." In *IEEE Transactions on Network Science and Engineering* (2018), Doi: 10.1109/TNSE.2018.2799845.
- [4]. Vishal Krishna Singh and Manish Kumar „In-network data processing in wireless sensor networks using compressed sensing“, *Int. J. Sensor Networks* (2018), Vol. 26, No. 3, pp.174–189. (SCI) (Impact Factor- 0.454), Inder Science Publishers.
- [5]. Vishal Krishna Singh, Manish Kumar and Shekhar Verma, "Accurate Detection of Important Events in WSNs," (2018) in *IEEE Systems Journal* (SCI) (Impact Factor- 3.854), vol. PP, no.99, pp. 1-10. Doi: 10.1109/JSYST.2017.2783353.
- [6]. Singh, Vivek Kumar, Shekhar Verma, and Manish Kumar. "DBCS: A Decomposition Based Compressive Sensing for Event Oriented Wireless Sensor Networks." *Wireless Personal Communications* 99, no. 1 (2018): 351-369.
- [7]. Singh, Vishal Krishna, Vivek Kumar Singh, and Manish Kumar. "In-Network Data Processing Based on Compressed Sensing in WSN: A Survey." *Wireless Personal Communications*: 1-38. (2017). doi:10.1007/s11277-017-4288-y. (**Impact Factor: 0.951**)
- [8]. Singh, Vishal Krishna, Rahul Verma, and Manish Kumar. "Energy Efficient Event Detection Using Probabilistic Inference in Wireless Sensor Networks." *IETE Journal of Research* (2017): 1-11. (Impact Factor: 0.909)
- [9]. Singh, Vishal Krishna, Gajendra Sharma, and Manish Kumar. "Compressed sensing based acoustic event detection in protected area networks with wireless multimedia sensors." *Multimedia Tools and Applications* 76, no. 18 (2017): 18531-18555. (Impact Factor: 1.530)
- [10]. Singh, Vishal Krishna, Rahul Verma, and Manish Kumar. "Voronoi Neighbor Based Energy Efficient Event Detection in Wireless Sensor Networks." *AEU-International Journal of Electronics and Communications* (2017). (Impact Factor: 1.147)
- [11]. Singh, Vishal Krishna, and Manish Kumar. "In-network data processing in wireless sensor networks using compressed sensing." *International Journal of Sensor Networks* 26, no. 3 (2018): 174-189.
- [12]. Singh, Vishal Krishna, and Manish Kumar. "A Compressed Sensing Approach to Resolve the Energy Hole Problem in Large Scale WSNs." *Wireless Personal Communications* 99, no. 1 (2018): 185-201.
- [13]. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Adaptive Locally Linear Embedding for Node Localization in Sensor Networks." *IEEE Sensors Journal* 17, no. 9 (2017): 2949-2956. (Impact factor: 2.512)
- [14]. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Incremental LLE for Localization in Sensor Networks." *IEEE Sensors Journal* 17, no. 19 (2017): 6483-6492. (Impact factor: 2.512)
- [15]. Singh, V.K., Singh, V.K. & Kumar, M., "In-Network Data Processing Based on Compressed Sensing in WSN: A Survey," *Wireless Pers Commun* (2017) 96: 2087. (Impact factor -0.957).
- [16]. Kumar, Manish, Shekhar Verma, and Kusum Lata. "Secure data aggregation in wireless sensor networks using homomorphic encryption." *International Journal of Electronics* 102.4 (2015): 690-702

List of Journal Papers (Scopus Indexed)

- [17]. Singh, Vishal Krishna, and Manish Kumar. "Hierarchical compressed sensing for cluster based wireless sensor networks." *Int J Adv Comput Sci Appl* 1, no. 7 (2016): 58-67.
- [18]. G. Sharma, M. Kumar and S. Verma "an approach of automatic acoustic data collection and categorizing" accepted in Springer–Advances in Intelligence and Soft Computing (AISC) [Scopus Indexed]
- [19]. G. Sharma, M. Kumar and S. Verma "realistic acoustic sensor network deployment and radio coverage in terrain profile using 3d modeling" accepted in Springer–Advances in Intelligence and Soft Computing (AISC) [Scopus Indexed]
- [20]. Frequent Itemset Mining in Large Datasets: A Survey, accepted in *International Journal of Information Retrieval Research (IJIRR)*, IGI publication, 2017.

- [21]. Kumar, Manish, Shekhar Verma, and Neerav Agarwal. "GMCA: a greedy multilevel clustering algorithm for data gathering in wireless sensor networks." *International Journal of Communication Networks and Distributed Systems* 11.2 (2013): 198-213.
- [22]. Kumar, Manish, Santanu Das, and Sneha Govil. "Analysis of Stock Volatility Clustering Using ANN." *Information Resources Management Journal (IRMJ)* 28.2 (2015): 32-45
- [23]. Kumar, Manish, and Sumit Kumar. "PATTERN GENERATION FOR COMPLEX DATA USING HYBRID MINING." *International Journal of Data Mining & Knowledge Management Process* 3.4 (2013): 127.
- [24]. Kumar, Manish, Pritish Kumar Varadwaj, and Shekhar Verma. "Two-phase clustering based aggregation of sensor data." *International Journal of Data Mining, Modelling and Management* 2.3 (2010): 216-237.
- [25]. Kumar, Manish, Monalisa Panigrahi, and Shekhar Verma. "XQuery based Query Processing Architecture in Wireless Sensor Networks." *International Journal of Computer Applications* 43.23 (2012). [Non Scopus]

List of Accepted Papers (International/National Conference)

- [1]. A. Pal, M. Kumar, "Pattern generation from event oriented sensor data using distributed sensor transaction model " MISNC-2017, 17-19 July, proceeding in ACM.
- [2]. Singh, V.K., Verma, S. & Kumar, M., "Jellyfish Detection Using Wireless Sensor Networks," is accepted for publication in International Conference on Information and Communication Technology(CICT-2017), 3-5 November.
- [3]. Singh, Vishal Krishna, Ankur Kumar Rai, and Manish Kumar. "Sparse Data Recovery using Optimized Orthogonal Matching Pursuit for WSNs." *Procedia Computer Science* 109 (2017): 210-216, ANT-2017, 17-19 May.
- [4]. Singh, Vishal Krishna, Saurabh Verma, and Manish Kumar. "Privacy preserving in-network aggregation in wireless sensor networks." *Procedia Computer Science* 94 (2016): 216-223, 11th International Conference on Future Networks and Communications (FNC-2016).
- [5]. Singh, Vishal Krishna., Ajit Singh, and Manish Kumar. "Data aggregation based link loss inference in wireless sensor networks." In *Electrical Computer and Electronics (UPCON), 2015 IEEE UP Section Conference on*, pp. 1-5. IEEE, 2015.
- [6]. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Locally linear embedding for node localization in wireless sensor networks." In *Computational Intelligence and Communication Networks (CICN), 2015 International Conference on*, pp. 126-130. IEEE, 2015.
- [7]. Singh, V.K., Verma, S. & Kumar, M., "Jellyfish Detection Using Wireless Sensor Networks," is accepted for publication in International Conference on Information and Communication Technology.
- [8]. G. Sharma, M. Kumar and S. Verma, "Monitoring deforestation using acoustic signals," 2016 International Conference on Bioinformatics and Systems Biology (BSB), Allahabad, 2016, pp. 1-4.
- [9]. "Data aggregation based link loss inference in wireless sensor networks, " in *IEEE UP Section Conference on Electrical Computer and Electronics (UPCON),2015*, pp. 1-5.IEEE, 2015.
- [10]. "Combined mining approach to generate patterns for complex data, " in *International conference on computer science and information technology*, February 18-20, 2013, Bangalore.
- [11]. "Rule extraction in Health care data, " in *National Seminar on Data Mining in Health Care (supported by CSIR)*, June 1-2, 2013, IIT, Allahabad.
- [12]. "Quantitative Trait Loci (QTL) Database Analysis for Finding Association among Traits, " in *International Conference on Bioinformatics and System Biology*, 19-21 Feb 2010.
- [13]. Published in IEEE Xplore paper titled "Clustering approach to Data Aggregation in Wireless Sensor Networks," in *ICON-2008*, 12-14 December, 2008, IIT Roorkee.

[14]. Published in IEEE Xplore paper titled "Data Clustering in Sensor Networks using ART, " in WCSN 2008, 27-29 December, 2008, IIIT-Allahabad.

[15]. Published in IEEE Xplore paper titled "Querying video sensor networks, " in WCSN- 2007, 11-15 December 2007, IIIT-Allahabad.

List of Journal Papers (Under Review- Revision Sent)

[1]. ODECS: An On-Demand Explosion based Compressed Sensing using Random Walks in Wireless Sensor Networks, under review in Systems Journal, Elsevier.

[2]. Pattern mining for large distributed dataset A parallel approach-PMLDD, submitted to IETE Journal of Research - Taylor & Francis.

[3]. Distributed Synthesized Association Mining for Big Transactional Data, submitted to Sadhana – Springer.

Books

(1) "Applied Big Data Analytics in Operations Management" " by IGI Global publications,USA, September 2016. (SCOPUS)

Book Chapters

(1)"Optimizing Software Error Proneness Prediction Using Bird-Mating Algorithm" accepted for publication in book "Software Project Management for Distributed Computing: Life-Cycle Methods for Developing Scalable and Reliable Tools." Springer(2016)

(2)"Predictive Analytics in Operations Management" for the book "Applied Big Data Analytics in Operations Management (2016):68." Under the IGI-Global publisher, USA. (2016)

(3) "Collaborative Filtering Based Data Mining for Large Data" for the book "Collaborative Filtering Based Data Mining for Large Data (2016):115" under the IGI-Global publisher, USA. (2016)

(4)"Rules Extraction using Data Mining in Historical Data" for the book "Business Intelligence: Concepts, Methodologies, Tools, and Applications (2015):263" under the IGI-Global publisher, USA. (2015)

(5) "Rule optimization of Web-logs data using Evolutionary Technique" for the book "Research Methods: Concepts, Methodologies, Tools, and Applications (2015):158" IGI-Global publisher, USA (2015)

(6)"Rules Extraction using data mining in Historical data" for the book "Data mining and Analysis in Engineering field" (2014):89. [IGI-Global publisher, USA]

(7) "Applications of data mining in social network analysis" for the book "Data mining in Dynamic Social Networks and Fuzzy Systems (2013), pp. 110-121." under the IGI-Global publisher, USA. (2013)

Invited Talks

(1)"Mining Big Data", Workshop on "Machine learning and Data Analytics (MLDA-2017)", 13 July – 18 July, 2017 IIIT, Allahabad.

(2)"Social Network Analysis", Workshop on "Machine learning and Data Analytics (MLDA-2017)", 13 July - 18 July, 2017 IIIT, Allahabad.

(3) "IoT and Wireless Sensor Networks", Short Term Course on "Workshop on Antenna Design and Signal Processing Techniques for 5G Networks and IoT"(ADSPNIT-2017), 27 Feb - 4 March, 2017 MNNIT, Allahabad.

- (4) "Mining Large Data", Short Term Course on "Workshop on Emerging Trends in Communication & Information Technology" (COMMIT-2017), 30 Jan - 3 Feb, 2017 SHUATS, Allahabad.
- (5) Keynote Speaker, in on "International workshop on Role of technological advances, incubation themes and engineering skills (TAITES-2016)", at CIT Kokarajhar, Assam, 21-23 January, 2016.
- (6) "Advances in database management systems", in on "Inservice course of PGT (CS) of Kendriya Vidyalaya Sangathan", Allahabad, 26th May 2016.
- (7) Keynote Speaker, in on "National workshop on Creation and Establishment of Virtual Classroom and e-Learning", at SHIATS Allahabad, 5-6 May, 2015.
- (8) "Data Management in mobile computing", Short Term Course on "Mobile, Ad hoc and Vehicular Communication" (MAVECOM-2013), July 22-27, 2013 MNNIT, Allahabad.
- (9) "Database Systems" in "Workshop on AFRES and PRIME", held at Headquarter North Central Railway-Allahabad during 24-28 January 2011.
- (10) "Application of Database Management Systems in Agriculture" in "National Training program on Trends in Bioinformatics and Computation Systems: Exploring Interconnections for Molecular Biological Applications", under "National Agriculture Innovation Project", 16-29 July 2011 at National Bureau of Agriculturally Important Microorganisms (NBAIM), Mau. U.P.
- (11) "Multidimensional modeling and data mining application" in "Short term course on Data Digitization, Data Warehousing & Data Mining" in 24-28th 2009 supported by DIT,MCIT,GOI organized by IIIT, Allahabad.
- (12) "Data management in Wireless Sensor Networks" in "pre-conference Workshop of WCSN", 11-15 December 2007 at IIIT-Allahabad.
- (13) "Database Technology", Finishing school for engineering students June 1-July 15, 2008 IIIT-Allahabad.